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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,253	10/22/2003	John Bryant	18634.0112	5443

7590 03/21/2005
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EXAMINER

MCELHENY JR, DONALD E

ART UNIT	PAPER NUMBER
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2857

DATE MAILED: 03/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

Office Action Summary

Application No.

10/691,253

Applicant(s)

BRYANT, JOHN

Examiner

Donald E. McElheny, Jr.

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-65 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-65 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04-05-04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 04-06-04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 21, 22, 23, 24, 28, 29, 30, 31, 32, 33, and 35 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Maudlin (20040075697 A1).

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 7, 10, 12, 17, 19, 26, 27, 36-41, 43, 46-50, 55, 57-60, 63 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maudlin as applied to claims rejected above, and further in view of Gibbs et al. (5,729,451 A).

Maudlin (20040075697 A1) teaches the basis graphic modeling system that includes display of above surface and below surface features. Specific mention and/or showing exists in this reference for the claimed features of claims 21-24, 28, 29, 30, 31, 32, 33, and 35.

While Maudlin teaches graphical model incorporation and merging of subsurface data and features in general, and specifically to soil types, water supplies, sewers and related GIS data, it lacks a specific teaching that such GIS data may include the features of these further dependent claims. However, such GIS types of subsurface/substrata measurements and features were notoriously well known at the time of filing of the instant application as exemplified by Gibbs et al. (5,729,451 A), also drawn to merger of various types of GIS data for modeling purposes. Gibbs et al. teach that such substrata data for modeling may be measured resistivity data and seismic data that may also be processed using least squares and/or kriging algorithms. Any of such measured substrata earth data by nature of its signal processing to derive substrata features has “enhanced” the signal data to show whatever anomalous (i.e. “anomaly”) subsurface feature exists that such sensors by nature detect; similarly, resistivity measurements are the norm for detecting moisture content of substrata.

It would have been obvious to one of ordinary skill in the art to combine the teachings of Maudlin and Gibbs et al. as both are related to substrata modeling and merger of various GIS types of data for such modeling purposes, and the teachings of one would have been routinely considered as alternative related GIS data types and operations in substrata modeling.

5. Claims 3-6, 8, 9, 11, 13-16, 18, 20, 25, 34, 42, 44, 45, 51-54, 56, 61, 62, and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maudlin in view of Gibbs et al. (5,729,451 A), as applied to claims rejected above, and further in view of applicant's own disclosure admissions.

Applicant's own written specification, primarily in the background pages 1-5, admit that standard GIS processing techniques typically involve the use of and types of computer programs and data source types as found in these dependent claims. No criticality is seen established nor attributed in applicant's written to invention involving the use of such well known prior art software, data types, and their GIS and VRML modeling usage. Therefore it would have been obvious to one of ordinary skill in the art to arbitrarily select such alternatives for such taught purposes, for the same motivations taught therein, and thus not have involved the concept of invention to include with either of the references of Maudlin or Gibbs et al. either alone or the combination of Maudlin and Gibbs et al. thereof.

6. The remaining prior art is cited as pertinent as additional teachings of many of the various claimed features.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald McElheny, Jr. whose telephone number is 571-272-2218. The examiner can normally be reached on Monday-Thursday from 7:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoff Marc, can be reached on weekdays at telephone number 571-272-2216. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).



Donald E. McElheny, Jr.
Primary Examiner
Art Unit 2857